

Application No.: 10/608,671

**Amendments to the Drawings:**

Please replace Fig. 1b-c with the enclosed replacement sheet.

Please replace Fig. 2 with the enclosed replacement sheet.

## **REMARKS**

Claims 1, 4, and 6-10 remain in the application for further prosecution. Claim 1 has been amended to distinguish the Buechler reference by incorporating the subject matter of cancelled Claims 2 and 3. Claim 4 has been amended to depend from amended Claim 1.

Corrected drawings are attached in compliance with 37 C.F.R. 1.121(d). Corresponding marked-up sheets, showing the revisions in red are included. No amendments to the specification are believed to be needed. Section marks have been added to Fig. 1b and Fig. 2 has been revised accordingly. It is believed that the unidirectional capillary passageway 42, extending from inlet 40 to the inlet chamber 44 is clearly shown in Fig. 1b and Fig. 2. Fig. 3a-c merely illustrate schematically alternatives to the structure of Fig. 2, as discussed on page 8 of the specification.

## **Rejections Under 35 U.S.C. § 102**

Claims 1 and 8 have been rejected under 35 U.S.C. § 102(b) as anticipated by Buechler (U.S. 6,113, 855). The previous rejection based on Columbus has been withdrawn. This rejection is based on a new principal reference and accordingly should have been a non-final office action, in order to provide the Applicants a right to amend the claims.

Buechler's patent is principally directed to improving the flow from one region of his assay device to another larger region, despite the need for additional space to accommodate the liquid volume. He solved his problem by adding structures to increase capillary forces in the larger region. However, Buechler provided only cursory information about the disposition of reagents in his device. Nor was Buechler concerned with the uniform distribution of liquids over reagents, which is the problem addressed by the Applicants. As in the proposed amendment of Claim 1, the Applicant's device now would require the presence of a groove or a weir to facilitate distribution across the inlet chamber. Therefore, Claim 1 no longer could be considered anticipated by Buechler, since he lacks the added features, as the Examiner has admitted.

As to Claim 8, it depends from Claim 1 and therefore also would not be anticipated by Buechler. Furthermore, Buechler contains only cursory reference to reagents in his device, or their disposition, since he was concerned with increasing capillary forces rather than uniformly

distributing liquids over reagents. The Applicants disagree with the Examiner's characterization of Claim 8 as being a statement of intended use. It should be clear that the device of Claim 8 is not the same device as that of Claim 1, since it has added structural features.

**Rejection Under Claim 35 U.S.C. §103**

Claims 2 and 3 have been rejected under 35 U.S.C. 103(a) as unpatentable (i.e. obvious) over Buechler in view of Columbus (U.S. 4,233,029). This rejection has been obviated by the proposed amendment, but will be considered as if applied against amended Claim 1.

As shown in Columbus '029, liquid is introduced at a central location from which it flows in all directions over the opposed set of grooves. The Applicants' device is entirely different since it enters one side of the inlet chamber and distributes liquids over the reagents in the chamber. Thus, the Columbus device is in no sense adapted for use in the Applicant's device. At most, using Columbus as a secondary reference involves both hindsight and selective use of the Columbus teachings.

Claims 4 and 6 have been rejected as unpatentable over Buechler and Columbus, in view of Peters (U.S. 6,296,126). If Claim 1 is found patentable over Buechler, then Claims 4 and 6 also should be patentable. Peters does teach the use of posts with grooves, but he positions the grooves so as to act as channels to empty capillaries. As Peters notes at column 3, lines 56 *et seq.*, his device is based on the "suction action" of the wedge shaped cut-outs. In the present invention, the wedge shaped cut-outs are optional and are positioned 90 degrees from the direction in which the liquid flows. Thus, their position is not that used by Peters and their use in the present invention could not be obvious in Claim 6. As to Claim 4, the use of wedge-shaped cut-outs does not provide a channel for liquid flow, as in Peters, but assists the uniform distribution of liquid over the groove or weir.

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Claim 7 has been rejected as unpatentable over Buechler in view of Wyzgol, et al. (U.S. 6,776,965). This claim also should be patentable if Claim 1, from which it depends is found patentable.

Claims 9 and 10 have been rejected as unpatentable over Buechler in view of Columbus (U.S. 4,618,476). As with the other claims depending from Claim 1, Claims 9 and 10 also should be patentable. Furthermore, it is incorrect to refer to chamber 470 of Columbus as an overflow chamber. It is a waste chamber. An overflow chamber as defined by the Applicants is one which receives excess sample liquid, so that the correct sample volume is contacted with the reagents in the inlet chamber.

In view of the above remarks the Examiner is urged to enter the proposed amendments and then allow the amended claims. If further amendments are believed necessary, the Examiner is invited to contact the Applicant's attorney at the telephone number provided below.

Respectfully submitted,

4/10/07  
Date

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ANNOTATED MARKED-UP DRAWINGS

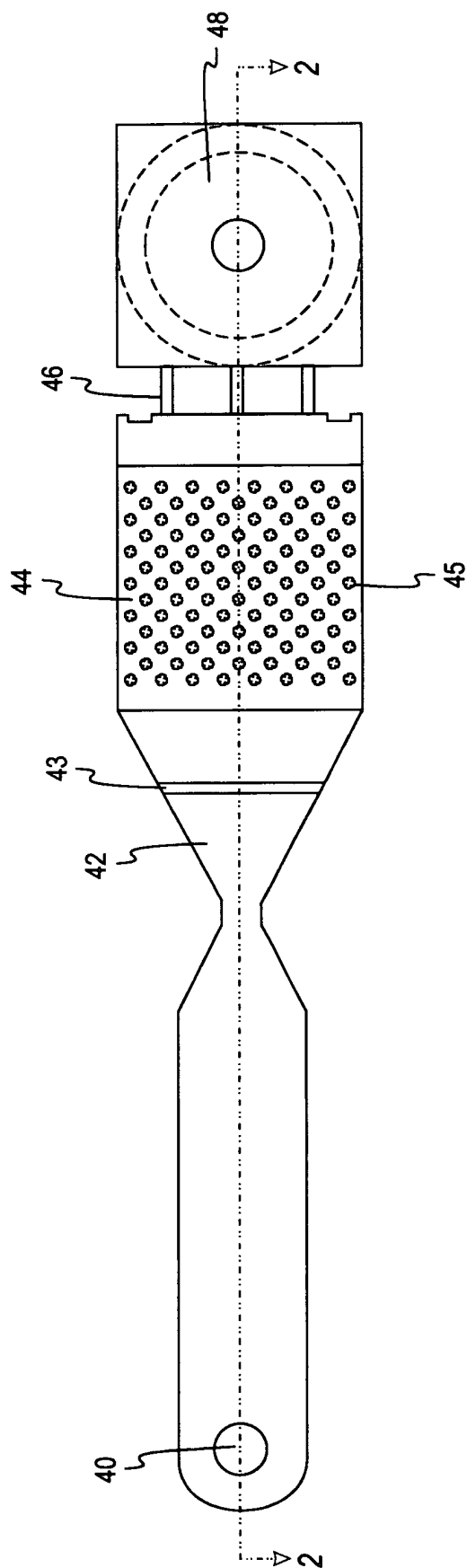


Fig. 1b

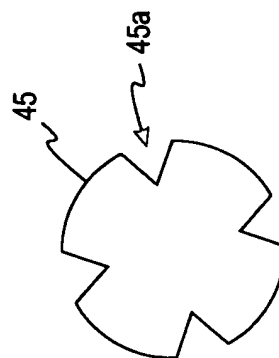
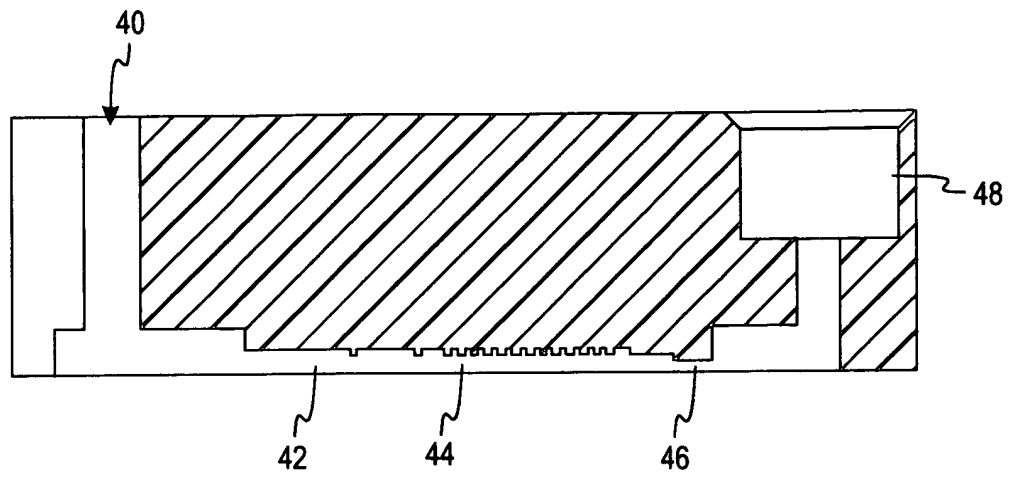


Fig. 1c

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ANNOTATED MARKED-UP DRAWINGS



*Fig. 2*



*Fig. 3a*



*Fig. 3b*



*Fig. 3c*